Third Agricultural Working Group Meeting
Meeting Minutes

James River and Its Tributaries
Water Quality Improvement Plan for Bacteria Impairments

5:00 PM, January 24, 2011
Westover Hills Library
1408 Westover Hills Blvd., Richmond, 23225

Facilitator: Ram Gupta, DCR
Recorder: Kelley West, DEQ

Attendees

Kelly West, DEQ-PRO
Seth Mullins, DEQ
Keith Burgess, Monacan SWCD
Margaret Smigo, DEQ
Grace LeRose, Richmond, DPU
Ed Cronin, Greely and Hansen
Debbie Byrd, Goochland CO.
Lance Gregory, VDH
Megan Maggard (on phone), MapTech
Ram Gupta – DCR-Richmond Regional Office

Meeting started with a introduction of attendees. Margaret Smigo distributed and briefly explained the content in the agricultural handouts. Ram Gupta indicated that the handouts have TMDL and some information which has already been shared at previous working group meetings, and also some new details on livestock, BMPs and landuse. He indicated to discuss and devote more time on new information. Tuckahoe Creek, which is a part of James River watershed, will be indicated separately in the IP document.

Livestock Population: Group discussed livestock numbers (Table 2). The numbers have been revised since last meeting. Keith indicated that there is no dairy in Bernards Creek sub-watershed, and only one with CAFO in Tuckahoe watershed. Megan indicated that this has been modeled as in subwatershed 2, falling into James River (Riverene). Keith suggested to keep 700 milkers in subwatershed-1. Margaret would email to SWCD and local staff to confirm livestock population in Almond and Powhite Creek watersheds; and to Chesterfield County for horse numbers. Grace does not think there are any horses in Reedy Creek watershed. Availability of subwatershed maps to the working group members would now enable to provide correct information on landuse and livestock population. Margaret will email questions to the group members for their response. Ram

suggested that in absence of any new data, numbers listed in TMDL development document would be used.

Agricultural BMPs: Agricultural BMPs already installed in the watersheds were taken from DCR-BMPs Tracking program. The group feels that BMPs listed there-in seem reasonable. Keith indicated that there is nothing in Bernards Ck watershed for Nutrient Management Plan (NMP). Seth stated that there is NMP for biosolids. Biosolids, if applicable, should be applied properly as per its permit requirements. NMP has not been treated as BMP while modeling the water quality. Debbie informed the group that some of the areas that are agricultural zoned now actually are wetland bank. She wanted to know how model is analyzing the cropland which has now permanently been converted to wetland. Megan asked her to provide converted acreage, so that land use in model is revised. Watershed maps provided with handouts would help modifying the landuse. Keith and Debbie would check it and provide revised data. Ram indicated that changes in cropland/wetland acreage would result into reduced bacteria loading, leading to changes in BMPs requirements needed to attain water quality standard (Tables 4 and 5). He also stated that subwatersheds maps would now enable to identify pasture and hayland separately, which might result in reduced stream fencing estimates. Also, Keith and Debbie thought stream fencing estimates are high and would review the watershed maps for pasture and hayland acreage.

Since, Tuckahoe Creek is now included in this IP, BMPs needs and implementation costs will be listed separately in IP document.

As suggested in previous working group, Reforestation of erodible crop and pastureland (FR-1) practice is added. Ram indicated that implementation of FR-1 is watershed-specific and may vary. A 5%-10% of crop and pastureland may be considered for FR-1. Megan wanted to know bacteria reduction efficiency of FR-1. Ram indicated that there is no efficiency available, and bacteria reductions are simulated by computer modeling. The changes in acreages in crop and pastureland will help simulating reduced bacteria loads from these sources. Ram also suggested to change "Retention Pond" to "Retention Basin", as ponds is constructed on live stream, while basin is at down gradient of grazing areas to collect surface water runoff, prior to any concentrated flow entering to stream. Megan would make change accordingly. However, working group thinks that retention basin is not the preferred BMP in study watersheds; and that to use proper names for SL-6, LE-1T and LE-2T practices in IP document.

The Improved pasture management includes practices to manage pasture, fencing for rotational grazing and watering system. One question is could we drag the pasture with a piece of fence to speed up the bacteria die-off; and if done what its cost and efficiency would be. Dragging could be a highly effective BMP in reducing bacteria, and be a part of nutrient management practice NMP. Megan will look into these details to see if it could be included in IP document. Keith was of the opinion that improved pasture management practice should be funded even if it is added later. SWCD would provide information on number of dairy, beef and horse farms, if any, benefiting from management areas required to reduce bacteria loadings (Table 5).

BMPs Cost and Efficiencies: Information was discussed in previous working group meetings and group found them reasonable. Keith and Seth indicated that there are no loafing lots for beef in Powhatan, concrete feeding facility for beef, all horses are confined, and a horse manure storage shed (3-5 horses) would cost approximately $3,000. Margaret will email questions to the group members for their response. Cost of livestock exclusion systems with buffer 35-ft or greater would be same. The owner would like to leave land fellow, but will have reservations on giving up their productive land. Also, in Table 5, Nutrient Management Plan– cropland would change to stream mileage with buffers (linear feet).

Megan indicated that BMPs recommended with their efficiencies meet the target bacteria reduction from agricultural sources in impaired watersheds. Availability of sub-watershed maps would enable SWCD to provide correct pasture and crop landuse data, and livestock population. Model re-runs would be made upon receipts of revised data.

Ram indicated that IP document to have implementation time-line and water quality milestones are included in the document. Implementation time-line for Ag BMPs is about 10 years. It might be different for urban and residential BMPs.

Meeting adjourned at 6:30 pm.